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COLOR	
LIB IMPRINT	
NONE BOUND BEFORE	
SEE OLD COVER	
SEE RUB	
NO LETTERING	
SEE S. B.	
DO NOT COLLATE	
DO NOT REMOVE ADS OR COVERS	
CRITERION	

BINDING CHARGE	
HAND SEWING	
SHELF NOS.	
EXTRA THICKNESS	
STUBBING	
HINGING	
LETTERING	
IMPRINT	
EXTRA TIME PREPARING, ETC.	

2 SEPARATE SET BY PEELING AT THIS SHEET AND BREAKING SPOT PASTING IN STUB

AMERICAN JOURNAL of PHYSICS

Devoted to the Instructional and Cultural Aspects of Physical Science

VOLUME 21 NUMBER 9, TWO PARTS—PART II

DECEMBER 1953

CUMULATIVE INDEX
Vols. 1–20, 1933–1952

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Foreword

IN order that the *American Journal of Physics* may be used effectively, an index covering more than one year at a time is necessary. It is even more necessary than it would be in the case of a journal of similar size in which much original research was reported, for the reason that developments in teaching do not follow as simple or as easily remembered a chronological pattern as developments in research.

Grateful acknowledgment to the National Science Foundation, which defrayed approximately 60 percent of the total cost of production of this index, is hereby made by the American Association of Physics Teachers and by other subscribers to the *Journal*. The balance of the cost was borne by the American Association of Physics Teachers itself.

The majority of the work required in the preparation of this 20-year cumulative index fell on the shoulders of Dr. B. H. Dickinson, Assistant Editor of the *American Journal of Physics,* who spent the equivalent of many months on the task. In organization and in typing, he was generously aided by Mrs. Dora Murphy, who recently concluded a three-year period of valuable service as secretary to the Editor of the *American Journal of Physics*. She, in turn, was assisted in the mechanical details by Miss Nancy Heuer and Miss Jane Turner.

All these individuals join the Editor in the hope that this 20-year index will serve its purpose in making the volumes of the *Journal* much more useful to their owners than they have been in the past.

THOMAS H. OSGOOD
Editor

July 6, 1953
East Lansing, Michigan

How to Use This Index

THIS Cumulative Index is intended to provide ready reference to all material published in the *American Journal of Physics* in Volumes 1 (1933) to 20 (1952). Since the system of indexing the early volumes differed from that used for later ones, a completely new index has been prepared. By its use the searcher should be able to locate the name of any contributor to the *Journal* or the title of his contribution.

The Index is subdivided into two parts: an Author Index listing the names of the contributors of papers, notes, letters, book reviews, and abstracts of addresses; and an Analytical Subject Index listing the titles of papers, notes, letters, book reviews, addresses, and digests of periodical literature. The Author Index lists the names of contributors alphabetically; the Analytical Subject Index lists the titles of contributions according to a Classification of Subjects to be found on page 2 of this Index. Since most papers and addresses can be classified under more than one of the categories listed, multiple listing of the titles has been employed in preference to a system of cross references, with the expectation that the Analytical Subject Index will be easier and quicker to use.

Location of the original contribution to the *Journal* may be made by use of the volume, page, and year-of-publication numbers following each item in the order indicated. Thus a listing, 17: 324—1949, signifies Volume 17, page 324, year 1949. In the case of an abstract of a paper or address, the Letter (A) follows the page number; similarly the letter (L) denotes a Letter to the Editor and the letter (T) designates an item published only by title. Contributions to the Regular Section and the Notes and Discussion Section of the *Journal* are not specially designated. The form in which Book Reviews are listed is such that their nature is immediately apparent.

Classification of Subjects

Author Index

THE Author Index lists names of contributors, together with the titles of their articles, notes, letters, book reviews, and abstracts, published in the *American Journal of Physics* in Volumes 1 (1933) to 20 (1952). Authors of articles and addresses, of which the title only was published, are not included. However, the titles of such articles and addresses are included in the Analytical Subject Index.

Location of the original contribution to the *Journal* may be made by means of the volume, page, and year-of-publication numbers following each item in the order indicated. For example, the listing, **17**: 324—1949, refers to Volume **17**, page 324, and year 1949. The letter (A) following the page number denotes that only an abstract of an article or address was published; the letter (L) signifies a Letter to the Editor. Articles included in the Regular Section or the Notes and Discussion Section of the Journal are not specially designated. The form in which Book Reviews are listed makes their nature apparent.

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Analytical Subject Index

THE Analytical Subject Index lists the titles of articles, notes, letters, book reviews, abstracts, and addresses published in the *American Journal of Physics* in Volumes 1 (1933) to 20 (1952), together with the names of authors and co-authors. Titles of contributions are listed according to a Classification of Subjects to be found on page 2 of this Index. In preference to using a system of cross references, multiple listing of titles has been employed in the belief that it will be easier to find a particular title when it is included under each of several categories under which it might reasonably be indexed.

Location of the original contribution to the *Journal* may be made by means of the volume, page, and year-of-publication numbers following each item in the order indicated. For example, the listing, **17**: 324—1949, refers to Volume **17**, page 324, year 1949. The letter (A) following the page number indicates that only an abstract of an article or address was published. Similarly the letter (L) following the page number signifies a Letter to the Editor and the letter (T) denotes an article or address published by title only. Contributions to the Regular Section or to the Notes and Discussion Section of the *Journal* are not specially designated. The form in which Book Reviews are listed makes their nature apparent.

Meetings—Association

Meetings—Sectional

Richtmyer Addresses

American Physical Society

Meetings

Presidential Addresses

Electronic

General

Laboratory and Demonstration

Light Sources

Magnetic

Mechanical

Nuclear

Optical

Photographic

Spectroscopic

Thermal

Timing

X-ray

Biophysics

Cosmic Rays

Cosmography

Courses

Advanced

Curricula

Introductory

Demonstrations

Acoustics

Atoms and Molecules

Electricity

Heat

Light

Magnetism

Mechanics

Microwaves

Nuclear Physics

Properties of Matter

Vibrations and Waves

Education, Physics and Science

Engineering Education

Industrial Physics

Physics Education

Professional Training

Public Educational Measures

Wartime Training in Physics and Science

Electricity and Magnetism

Alternating Currents

Apparatus (Electrical)

Direct Currents

Electromagnetism

Electronics

Electrons and Ions

Electrostatics

General

Instruments (Electrical)

Magnetism

Employment of Physicists

Experiments

Advanced Laboratory

Electronics

General

Heat

Light

Mechanics

Properties of Matter

Sound

General Education

Courses

Principles

General Physics, Educational Aspects

Errors

First-Year Physics Course

Significance of Physics Education

Student Achievement

Student Attitude

Teaching of General Physics

General Physics, Instructional Techniques

Aids

Classroom and Laboratory

General Principles

Problem Solving

Student Projects

Techniques—Electricity and Magnetism

Techniques—Heat

Techniques—Light

Geophysics

Heat and Thermodynamics

Applications

Conduction

Expansion

Gas Properties

Thermodynamics

History and Biography

Ancient Science

Portraits and Prints

Reminiscences

Reports and Summaries

Industrial and Governmental Research

Governmental Agencies

Laboratory Arts and Techniques

Equipment

Maintenance and Repair

Manipulation

Diffraction

Double Refraction and Polarization

Geometrical Optics

Illumination

Instruments

Sources

Spectra

Vision

Mathematics

Applications

Computations

Curve Fitting

Equations

General Principles

Geometry

Mechanics

Applications

Centripetal Motion

Demonstrations and Experiments

Dynamics

Falling Objects

Fluid Mechanics

General Principles

Gravitation and Planetary Motion

Gyroscopic Motion

Rotational Motion

Statics

Vehicles

Vibration

Waves

Mesons

Meteorology

Modern Physics

Nuclear Physics

Atomic Masses

Atomic Physics

Reactors

Resonance

Scattering Experiments

Structure of the Nucleus

Philosophy of Science

Causality

Ethics and Morality

Logic of Science

Physics and Philosophy

Scientific Method

Elasticity and Plasticity

Electrical

Friction

Gases

Liquids

Miscellaneous

Publications

Rockets

Secondary School Physics

Social and Economic Aspects of Science

Academic Relations

Atomic Energy

Better Living

Contributions to General Welfare

Cultural Goals

Sound

Doppler Effect

General

Hearing

Interference and Diffraction

Music

Reflection and Refraction

Resonance

Shock Waves

Sound Waves

Sources

Testing, Theory and Techniques

Aptitude Tests

College Entrance Examinations

Comprehensive Tests

Cooperative Testing Program

General

Grading Tests

Laboratory Tests

Criticism and Evaluation

Errors

Laboratory Manuals

Library

Miscellaneous

Recent Publications

Teaching of Units

Terminology

Visual Materials and Methods

Cartoons

Charts

Diagrams

Exhibits

Films

Methods

Models

Oscillographs

General

Measurement